



SEQUENCE LISTING

<110> Oncoimmunin, Inc.  
Komoriya, Akira  
Packard, Beverly

<120> COMPOSITIONS FOR THE DETECTION OF ENZYME ACTIVITY IN BIOLOGICAL SAMPLES AND METHODS OF USE THEREOF

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<140> US 09/394,019  
<141> 1999-09-10

<150> PCT/US98/00300  
<151> 1998-02-20

<150> US 08/802,981  
<151> 1997-02-20

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<170> PatentIn version 3.2

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Gly Tyr

<210> 36  
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<400> 36

Lys Asp Xaa Xaa Gly Xaa Asp Glu Val Asp Gly Ile Asp Gly Xaa Pro  
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Lys Gly Lys

<210> 37  
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<400> 37

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Lys Gly Tyr

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<400> 38

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Lys Gly Tyr

<210> 39  
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<212> PRT  
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<400> 39

Lys Asp Xaa Xaa Gly Trp Asp Glu Val Asp Gly Ile Asp Gly Xaa Pro  
1 5 10 15

Lys Gly Tyr

<210> 40  
<211> 20  
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<223> X is epsilon aminocaproic acid

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<222> (16)..(16)

<223> Xaa can be any naturally occurring amino acid

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Pro Lys Gly Tyr  
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<210> 41

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<223> Xaa can be any naturally occurring amino acid

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<223> X is epsilon aminocaproic acid

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<222> (6)..(7)

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Pro Lys Gly Tyr  
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<212> PRT

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<223> X is Aib

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<223> Xaa can be any naturally occurring amino acid

<400> 42

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<210> 43

<211> 14

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Lys Asp Xaa Tyr Val Ala Asp Gly Ile Asn Pro Lys Gly Tyr  
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<210> 44

<211> 14

<212> PRT

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<220>

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<400> 44

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<210> 45

<211> 16

<212> PRT

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<220>

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<210> 46

<211> 16

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<220>

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<400> 46

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<210> 47  
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<400> 47

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1 5 10 15

<210> 48  
<211> 18  
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<400> 48
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Gly Tyr

<210> 49
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<400> 49
Lys Asp Xaa Xaa Gly Tyr Val Ala Asn Gly Ile Asp Gly Xaa Pro Lys
1           5             10          15

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Gly Tyr

<210> 50  
<211> 18  
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Gly Tyr

<210> 51  
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1 5 10 15

Gly Tyr

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<220>  
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<222> (14)..(14)  
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<400> 52

Lys Asp Xaa Xaa Gly Tyr Val Ala Asp Gly Ile Asn Gly Xaa Pro Lys  
1 5 10 15

Gly Tyr

<210> 53  
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<400> 53

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Tyr

<210> 54  
<211> 17  
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<220>  
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Tyr

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<210> 56
<211> 16
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<212> PRT
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1 5 10 15

<210> 57
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<400> 57
Lys Asp Xaa Xaa Gly Leu Val Glu Ile Asp Asn Gly Gly Xaa Pro Lys
1 5 10 15
Gly Tyr

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<210> 58  
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<400> 58

Lys Asp Xaa Xaa Gly Leu Val Glu Ile Asn Asn Gly Gly Xaa Pro Lys  
1 5 10 15

Gly Tyr

<210> 59  
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<400> 59

Lys Asp Pro Xaa Gly Ile Glu Thr Glu Ser Gly Val Gly Xaa Pro Lys  
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Gly Tyr

<210> 60  
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1

5

10

15

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<210> 62  
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Tyr

<210> 63  
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<400> 63

Lys Asp Xaa Gly Ile Glu Thr Asn Ser Gly Val Asp Asp Pro Lys Gly  
1 5 10 15

Tyr

<210> 64  
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<400> 64

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Lys Gly Tyr

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<400> 65

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Tyr

<210> 66  
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Lys Asp Xaa Xaa Gly Ile Glu Thr Asp Ser Gly Val Xaa Pro Lys Gly  
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Tyr

<210> 67  
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<400> 67

Lys Asp Xaa Xaa Gly Ile Glu Thr Asn Ser Gly Val Xaa Pro Lys Gly  
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Tyr

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<223> Xaa can be any naturally occurring amino acid
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<400> 68

Lys Asp Xaa Xaa Gly Gly Ile Glu Thr Asp Ser Gly Val Gly Xaa Pro  
1                       5                           10                           15

Lys Gly Tyr

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<210> 69
<211> 19
<212> PRT
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<220>
<223> Synthetic peptide substrate
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<400> 69  
  
Lys Asp Xaa Xaa Gly Gly Ile Glu Thr Asn Ser Gly Val Gly Xaa Pro  
1 5 10 15

Lys Gly Tyr

<210> 70  
<211> 19  
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<400> 70

Lys Asp Xaa Gly Ser Glu Ser Met Asp Ser Gly Ile Ser Leu Asp Pro  
1 5 10 15

Lys Gly Tyr

<210> 71  
<211> 17  
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<400> 71

Lys Asp Xaa Gly Gly Ser Glu Ser Met Asp Ser Gly Gly Pro Lys Gly  
1 5 10 15

Tyr

<210> 72  
<211> 19  
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<223> Xaa can be any naturally occurring amino acid  
  
<400> 72

Lys Asp Xaa Xaa Gly Gly Ser Glu Ser Met Asp Ser Gly Gly Xaa Pro  
1 5 10 15

Lys Gly Tyr

<210> 73  
<211> 19  
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<223> Xaa can be any naturally occurring amino acid

<400> 73

Lys Asp Xaa Xaa Gly Asp Val Val Cys Cys Ser Met Ser Gly Xaa Pro
1           5           10          15

Lys Gly Tyr

<210> 74
<211> 19
<212> PRT
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<220>
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<223> X is epsilon aminocaproic acid

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<220>
<221> misc_feature

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<222> (15)..(15)  
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<400> 74

Lys Asp Xaa Xaa Gly Asp Val Val Cys Asp Ser Met Ser Gly Xaa Pro  
1 5 10 15

Lys Gly Tyr

<210> 75  
<211> 19  
<212> PRT  
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<220>  
<221> misc\_feature  
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<400> 75

Lys Asp Xaa Xaa Gly Asp Val Val Cys Cys Ser Met Ser Gly Xaa Pro  
1 5 10 15

Lys Gly Tyr

<210> 76  
<211> 19

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<212> PRT
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<220>
<221> misc_feature
<222> (15)..(15)
<223> Xaa can be any naturally occurring amino acid

<400> 76

Lys Asp Xaa Xaa Gly Asp Val Val Cys Asp Ser Met Ser Gly Xaa Pro
1 5 10 15

Lys Gly Tyr

<210> 77
<211> 19
<212> PRT
<213> Artificial

<220>
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<220>
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<223> Xaa can be any naturally occurring amino acid

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<223> X is epsilon-aminocaproic acid

<220>

<221> misc\_feature

<222> (15)..(15)

<223> Xaa can be any naturally occurring amino acid

<400> 77

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Asp | Xaa | Xaa | Gly | Asp | Val | Val | Cys | Cys | Pro | Met | Ser | Gly | Xaa | Pro |
| 1   |     |     |     | 5   |     |     |     |     |     | 10  |     |     | 15  |     |     |

Lys Gly Tyr

<210> 78

<211> 18

<212> PRT

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<220>

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<221> misc\_feature

<222> (14)..(14)

<223> Xaa can be any naturally occurring amino acid

<400> 78

Lys Asp Xaa Xaa Gly Glu Asp Val Val Cys Cys Ser Gly Xaa Pro Lys  
1 5 10 15

Gly Tyr

<210> 79

<211> 18

<212> PRT

<213> Artificial

<220>

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<222> (14)..(14)

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<400> 79

Lys Asp Xaa Xaa Gly Glu Asp Val Val Cys Asp Ser Gly Xaa Pro Lys  
1 5 10 15

Gly Tyr

<210> 80

<211> 18

<212> PRT

<213> Artificial

<220>

<223> Synthetic peptide substrate

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<220>
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<220>
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<223> V is D form

<220>
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<223> X is epsilon-aminocaproic acid

<220>
<221> misc_feature
<222> (14)..(14)
<223> Xaa can be any naturally occurring amino acid

<400> 80

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|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Asp | Xaa | Xaa | Gly | Glu | Asp | Val | Val | Cys | Cys | Pro | Gly | Xaa | Pro | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

Gly Tyr

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<210> 81
<211> 18
<212> PRT
<213> Artificial

<220>
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<220>  
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<220>  
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<400> 81

Lys Asp Xaa Xaa Gly Glu Asp Val Val Cys Asp Pro Gly Xaa Pro Lys  
1 5 10 15

Gly Tyr

<210> 82  
<211> 19  
<212> PRT  
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<220>  
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<220>
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<400> 82
      Lys Asp Xaa Xaa Gly Asp Val Val Cys Cys Ser Met Ser Gly Xaa Pro
      1           5                   10                  15

Lys Gly Tyr

<210> 83
<211> 19
<212> PRT
<213> Artificial

<220>
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<220>
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<220>
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<223> V is D form

<220>
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<223> X is epsilon-aminocaproic acid

<220>
<221> misc_feature
<222> (15)..(15)
<223> Xaa can be any naturally occurring amino acid

<400> 83
      Lys Asp Xaa Xaa Gly Asp Val Val Cys Asp Ser Met Ser Gly Xaa Pro
      1           5                   10                  15

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Lys Gly Tyr

<210> 84  
<211> 19  
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<220>  
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1 5 10 15

Lys Gly Tyr

<210> 85  
<211> 18  
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<220>  
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<400> 85

Lys Asp Xaa Xaa Gly Asp Val Val Cys Cys Ser Met Gly Xaa Pro Lys  
1 5 10 15

Gly Tyr

<210> 86  
<211> 18  
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<223> Xaa can be any naturally occurring amino acid

<400> 86
      Lys Asp Xaa Xaa Gly Asp Val Val Cys Asp Ser Met Gly Xaa Pro Lys
      1           5           10          15

Gly Tyr

<210> 87
<211> 16
<212> PRT
<213> Artificial

<220>
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<223> Xaa can be any naturally occurring amino acid

<400> 87
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      1           5           10          15

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<210> 88
<211> 16
<212> PRT
<213> Artificial

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<220>
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<400> 88

Lys Asp Xaa Xaa Gly Val Cys Asp Ser Met Gly Xaa Pro Lys Gly Tyr
      5           10          15

<210> 89
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<220>
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<220>
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<220>
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<400> 89

Lys Asp Xaa Xaa Gly Asp Glu Met Glu Glu Cys Ser Gln His Leu Pro
      5           10          15

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Lys Gly Tyr

<210> 90  
<211> 19  
<212> PRT  
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<220>  
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<220>  
<221> MOD\_RES  
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<223> X is epsilon aminocaproic acid

<400> 90

Lys Asp Xaa Xaa Gly Asp Glu Met Glu Glu Cys Pro Gln His Leu Pro  
1 5 10 15

Lys Gly Tyr

<210> 91  
<211> 19  
<212> PRT  
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<220>  
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<220>  
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<400> 91

Lys Asp Xaa Xaa Gly Asp Glu Met Glu Glu Asp Ser Gln His Leu Pro  
1 5 10 15

Lys Gly Tyr

<210> 92  
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<220>  
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<220>  
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<400> 92

Lys Asp Xaa Xaa Gly Glu Met Glu Glu Cys Ser Gln His Leu Pro Lys  
1 5 10 15

Gly Tyr

<210> 93  
<211> 18  
<212> PRT  
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<220>  
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<220>

<221> MOD\_RES  
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<400> 93

Lys Asp Xaa Xaa Gly Glu Met Glu Glu Cys Pro Gln His Leu Pro Lys  
1 5 10 15

Gly Tyr

<210> 94  
<211> 18  
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<220>  
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<220>  
<221> MOD\_RES  
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<400> 94

Lys Asp Xaa Xaa Gly Glu Met Glu Glu Asp Ser Gln His Leu Pro Lys  
1 5 10 15

Gly Tyr

<210> 95  
<211> 19  
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<220>
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<400> 95

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1           5          10          15

Lys Gly Tyr

<210> 96
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<400> 96

Lys Asp Xaa Xaa Gly Glu Met Glu Glu Cys Pro Gln His Leu Gly Pro
1           5          10          15

Lys Gly Tyr

<210> 97
<211> 19
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<223> X is Aib

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<220>
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<223> X is epsilon aminocaproic acid

<400> 97
      Lys Asp Xaa Xaa Gly Glu Met Glu Glu Asp Ser Gln His Leu Gly Pro
      1           5          10                      15
      Lys Gly Tyr

<210> 98
<211> 20
<212> PRT
<213> Artificial

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<220>
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<223> Xaa can be any naturally occurring amino acid

<400> 98
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      1           5          10                      15
      Pro Lys Gly Tyr
      20

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<210> 99
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<223> Xaa can be any naturally occurring amino acid

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<220>
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<220>
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<223> Xaa can be any naturally occurring amino acid

<400> 99
Lys Asp Xaa Xaa Gly Glu Met Glu Glu Cys Pro Gln His Leu Gly Xaa
1 5 10 15

Pro Lys Gly Tyr
20

<210> 100
<211> 20
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<220>
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<220>
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<223> X is episilon-aminocaproic acid

<220>
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<223> Xaa can be any naturally occurring amino acid

<400> 100
      Lys Asp Xaa Xaa Gly Glu Met Glu Glu Asp Ser Gln His Leu Gly Xaa
      1           5             10                      15

      Pro Lys Gly Tyr
      20

<210> 101
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<220>
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<223> Xaa can be any naturally occurring amino acid

<400> 101
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      1           5             10                      15

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Tyr

<210> 102  
<211> 17  
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<220>  
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<223> Xaa can be any naturally occurring amino acid  
  
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Lys Asp Xaa Xaa Gly Val Met Thr Gly Arg Thr Gly Xaa Pro Lys Gly  
1 5 10 15

Tyr

<210> 103  
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<223> X is epsilon-aminocaproic acid
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<223> Xaa can be any naturally occurring amino acid
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<400> 103

Lys Asp Xaa Xaa Gly Val Met Thr Gly Arg Thr Gly Xaa Pro Lys Gly  
1                       5                           10                           15

Tyr

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<210> 104
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<212> PRT
<213> Artificial
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<220>
<223> Synthetic peptide substrate
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<223> X is epsilon aminocaproic acid
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<223> X is epsilon-aminocaproic acid
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<220>
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<223> Xaa can be any naturally occurring amino acid

<400> 104
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1           5                   10                  15

Tyr

<210> 105
<211> 16
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<220>
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<220>
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<223> Xaa can be any naturally occurring amino acid

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<223> X is epsilon aminocaproic acid

<220>
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<223> X is epsilon-aminocaproic acid

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<223> Xaa can be any naturally occurring amino acid

<400> 105
Lys Asp Xaa Xaa Gly Val Met Thr Gly Arg Gly Xaa Pro Lys Gly Tyr
1           5                   10                  15

<210> 106
<211> 17
<212> PRT
<213> Artificial

<220>
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<223> X is Aib

<220>
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<223> Xaa can be any naturally occurring amino acid

<220>
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<223> X is epsilon aminocaproic acid

<220>
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<223> X is epsilon-aminocaproic acid

<220>
<221> misc_feature
<222> (13)..(13)
<223> Xaa can be any naturally occurring amino acid

<400> 106

Lys Asp Xaa Xaa Gly Val Met Thr Gly Arg Gly Gly Xaa Pro Lys Gly
1           5          10                      15

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Tyr

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<210> 107
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<212> PRT
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<220>
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<223> Xaa can be any naturally occurring amino acid

<220>
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<223> X is epsilon aminocaproic acid

<220>
<221> MOD_RES
<222> (7)..(7)
<223> M is D form

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<223> X is epsilon-aminocaproic acid

<220>
<221> misc_feature
<222> (13)..(13)
<223> Xaa can be any naturally occurring amino acid

<400> 107

Lys Asp Xaa Xaa Gly Val Met Thr Gly Arg Gly Gly Xaa Pro Lys Gly
1           5          10          15

Tyr

<210> 108
<211> 8
<212> PRT
<213> Artificial

<220>
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<220>
<221> MOD_RES
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<223> K is blocked with Fmoc

<220>
<221> MOD_RES
<222> (4)..(4)
<223> X is epsilon aminocaproic acid

<220>
<221> misc_feature
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<223> Xaa can be any naturally occurring amino acid

<400> 108

Lys Asp Pro Xaa Thr Gly Arg Thr
1           5

<210> 109
<211> 11
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide substrate

<220>
<221> MOD_RES
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<223> D is blocked with Fmoc

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<400> 109

Asp Pro Thr Gly Arg Thr Gly Pro Lys Gly Tyr  
1 5 10

<210> 110  
<211> 15  
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<220>  
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<220>  
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<220>  
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<220>  
<221> misc\_feature  
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<400> 110

Lys Asp Pro Val Met Thr Gly Arg Thr Gly Xaa Pro Lys Gly Tyr  
1 5 10 15

<210> 111  
<211> 13  
<212> PRT  
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<220>  
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<220>  
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<220>  
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<220>  
<221> misc\_feature  
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<400> 111

Lys Asp Pro Thr Gly Arg Thr Gly Xaa Pro Lys Gly Tyr  
1 5 10

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<210> 112
<211> 15
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<220>
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<220>
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<220>
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<223> Xaa can be any naturally occurring amino acid

<220>
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<223> X is epsilon-aminocaproic acid

<220>
<221> misc_feature
<222> (11)..(11)
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<400> 112
Lys Asp Pro Xaa Gly Thr Gly Arg Thr Gly Xaa Pro Lys Gly Tyr
1           5          10                      15

<210> 113
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<212> PRT
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<220>
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<220>
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<220>
<221> misc_feature
<222> (4)..(4)

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<223> Xaa can be any naturally occurring amino acid

<400> 113

Lys Asp Pro Xaa Gly Thr Gly Arg Thr Gly Pro Lys Gly Tyr  
1 5 10

<210> 114

<211> 13

<212> PRT

<213> Artificial

<220>

<223> Synthetic peptide substrate

<220>

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<223> K is blocked with Fmoc

<400> 114

Lys Asp Pro Gly Thr Gly Arg Thr Gly Pro Lys Gly Tyr  
1 5 10

<210> 115

<211> 14

<212> PRT

<213> Artificial

<220>

<223> Synthetic peptide substrate

<220>

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<220>

<221> misc\_feature

<222> (4)..(4)

<223> Xaa can be any naturally occurring amino acid

<220>

<221> MOD\_RES

<222> (10)..(10)

<223> X is epsilon-aminocaproic acid

<220>

<221> misc\_feature

<222> (10)..(10)

<223> Xaa can be any naturally occurring amino acid

<400> 115

Lys Asp Pro Xaa Thr Gly Arg Thr Gly Xaa Pro Lys Gly Tyr  
1 5 10

<210> 116

<211> 13  
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<220>  
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<220>  
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<223> X is 4-aminobutyric acid

<220>  
<221> misc\_feature  
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<223> Xaa can be any naturally occurring amino acid

<400> 116

Lys Asp Pro Xaa Thr Gly Arg Thr Gly Pro Lys Gly Tyr  
1 5 10

<210> 117  
<211> 13  
<212> PRT  
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<220>  
<223> Synthetic peptide substrate

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<223> X is 8-aminobutyric acid

<220>  
<221> misc\_feature  
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<400> 117

Lys Asp Pro Xaa Thr Gly Arg Thr Gly Pro Lys Gly Tyr  
1 5 10

<210> 118  
<211> 17  
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<220>  
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<220>

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<220>
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<220>
<221> misc_feature
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<223> Xaa can be any naturally occurring amino acid

<400> 118
Lys Asp Xaa Xaa Gly Val Met Thr Gly Arg Val Gly Xaa Pro Lys Gly
1 5 10 15
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Tyr

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<210> 119
<211> 17
<212> PRT
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<220>
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<223> Xaa can be any naturally occurring amino acid

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<223> X is epsilon aminocaproic acid

<220>
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<222> (7)..(7)
<223> M is D form

<220>
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<222> (13)..(13)
<223> X is epsilon-aminocaproic acid

<220>
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<221> misc_feature
<222> (13)..(13)
<223> Xaa can be any naturally occurring amino acid

<400> 119
      Lys Asp Xaa Xaa Gly Val Met Thr Gly Arg Val Gly Xaa Pro Lys Gly
      1           5                   10                      15

Tyr
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<210> 120
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<220>
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<220>
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<223> Xaa can be any naturally occurring amino acid

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<223> X is epsilon aminocaproic acid

<220>
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<223> X is epsilon-aminocaproic acid

<220>
<221> misc_feature
<222> (13)..(13)
<223> Xaa can be any naturally occurring amino acid

<400> 120
      Lys Asp Xaa Xaa Gly Val Met Thr Gly Arg Ala Gly Xaa Pro Lys Gly
      1           5                   10                      15
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Tyr

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<210> 121
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<212> PRT
<213> Artificial

<220>
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<223> Synthetic peptide substrate

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<220>  
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<223> X is epsilon aminocaproic acid

<220>  
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<222> (7)..(7)  
<223> M is D form

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<220>  
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<400> 121

Lys Asp Xaa Xaa Gly Val Met Thr Gly Arg Ala Gly Xaa Pro Lys Gly  
1 5 10 15

Tyr

<210> 122  
<211> 26  
<212> PRT  
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<220>  
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<222> (4)..(4)  
<223> Xaa can be any naturally occurring amino acid

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<221> misc\_feature  
<222> (22)..(22)  
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<400> 122

Lys Asp Pro Xaa Gly Ser Glu Val Lys Leu Asp Ala Glu Phe Gly Xaa  
1 5 10 15

Pro Lys Gly Tyr Gly Xaa Pro Lys Gly Tyr  
20 25

<210> 123  
<211> 20  
<212> PRT  
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<220>  
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<220>  
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<220>  
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<222> (4)..(4)  
<223> X is epsilon aminocaproic acid

<220>  
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<222> (4)..(4)  
<223> Xaa can be any naturally occurring amino acid

<220>  
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<223> L is D form

<220>  
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<222> (14)..(14)  
<223> F is D form

<220>  
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<223> X is epsilon-aminocaproic acid

<220>  
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<223> Xaa can be any naturally occurring amino acid

<400> 123

Lys Asp Pro Xaa Gly Ser Glu Val Lys Leu Asp Ala Glu Phe Gly Xaa  
1 5 10 15

Pro Lys Gly Tyr  
20

<210> 124  
<211> 20  
<212> PRT  
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<220>  
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<223> K is blocked with Fmoc

<220>  
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<222> (4)..(4)  
<223> X is epsilon aminocaproic acid

<220>  
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<220>  
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<220>  
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<223> Xaa can be any naturally occurring amino acid

<400> 124

Lys Asp Pro Xaa Gly Ser Glu Val Lys Leu Asp Ala Glu Phe Gly Xaa  
1 5 10 15

Pro Lys Gly Tyr  
20

<210> 125  
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<220>  
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<220>  
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<223> K is blocked with Fmoc

<220>  
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<223> X is Aib

<220>  
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<223> Xaa can be any naturally occurring amino acid

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<223> X is epsilon aminocaproic acid

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<220>  
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<400> 125

Lys Asp Xaa Xaa Gly Ser Glu Val Asn Leu Asp Ala Glu Phe Gly Xaa  
1 5 10 15

Pro Lys Asp Asp Tyr

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<210> 126
<211> 21
<212> PRT
<213> Artificial

<220>
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<223> Xaa can be any naturally occurring amino acid

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<223> X is epsilon aminocaproic acid

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<222> (16)..(16)
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<400> 126
Lys Asp Xaa Xaa Gly Ser Glu Val Lys Leu Asp Ala Glu Phe Gly Xaa
1 5 10 15

Pro Lys Asp Asp Tyr
20

<210> 127
<211> 21
<212> PRT
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<223> Xaa can be any naturally occurring amino acid

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<223> X is epsilon aminocaproic acid

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<220>

<221> misc\_feature

<222> (16)..(16)

<223> Xaa can be any naturally occurring amino acid

<400> 127

Lys Asp Xaa Xaa Gly Ser Glu Val Lys Met Asp Ala Glu Phe Gly Xaa  
1 5 10 15

Pro Lys Asp Asp Tyr  
20

<210> 128

<211> 21

<212> PRT

<213> Artificial

<220>

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<223> Xaa can be any naturally occurring amino acid

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<220>

<221> misc\_feature

<222> (16)..(16)

<223> Xaa can be any naturally occurring amino acid

<400> 128

Lys Asp Xaa Xaa Gly Ser Glu Val Lys Met Asp Asp Glu Phe Gly Xaa

1

5

10

15

Pro Lys Asp Asp Tyr  
20

<210> 129  
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<220>  
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<400> 129

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<400> 130

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Gly Xaa Pro Lys Asp Asp Tyr  
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Asp Tyr

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<210> 134
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<400> 134

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<210> 140  
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Pro Lys Gly Tyr
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Gly Tyr

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5

10

15

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Gly Tyr

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Lys Gly Tyr

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Gly Tyr

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<220>

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Asp Val Val Cys Pro Met Ser  
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<210> 167

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<223> Xaa is norleucine

<220>

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<223> Xaa can be any naturally occurring amino acid

<400> 167

Asp Ala Ile Pro Xaa Ser Ile Pro Cys  
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<210> 168

<211> 11

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<400> 168

Asp Ala Ile Pro Xaa Ser Ile Pro Lys Gly Tyr  
1 5 10

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<400> 169

Asp Glu Val Asp Gly Ile Asp Pro Lys Gly Tyr  
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<400> 171

Lys Asp Ala Ile Pro Xaa Ser Ile Pro Lys Gly Tyr  
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<400> 173
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Asp Ala Ile Pro Xaa Ser Ile Pro Lys Gly Tyr  
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<400> 174

Lys Asp Asx Asp Glu Val Asp Gly Ile Asp Pro Lys Gly Tyr  
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Lys Asp Asx Asp Glu Val Asp Gly Ile Asp Pro Lys Gly Tyr  
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Lys Asp Asx Asp Glu Val Asn Gly Ile Asp Pro Lys Gly Tyr  
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<210> 177  
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Lys Asp Asx Asp Glu Val Asn Gly Ile Asp Pro Lys Gly Tyr

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<400> 178

Lys Asp Asx Glu Val Asp Gly Ile Asp Pro Lys Gly Tyr  
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<400> 179

Lys Asp Tyr Asx Ala Asp Gly Ile Asp Pro Lys Gly Tyr  
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<400> 180

Lys Asp Asx Gly Asp Glu Val Asp Gly Ile Asp Gly Pro Lys Gly Tyr  
1 5 10 15

<210> 181

<211> 18

<212> PRT

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<222> (4)..(4)

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      1           5          10                      15
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Gly Tyr

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Lys Asp Asx Xaa Gly Asp Glu Val Asp Gly Ile Asp Gly Xaa Pro Lys
1 5 10 15
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Gly Tyr

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<400> 183

Lys Asp Tyr Asx Ala Asp Gly Ile Asp Pro Lys Gly Tyr
1 5 10
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Lys Asp Asx Glu Val Asp Gly Ile Asp Pro Lys Gly Tyr  
1 5 10

<210> 185

<211> 12

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<223> Xaa can be any naturally occurring amino acid

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<400> 185

Lys Asp Ala Ile Pro Xaa Ser Ile Pro Lys Gly Tyr  
1 5 10

<210> 186

<211> 18

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Lys Asp Asx Xaa Gly Asp Glu Val Asp Gly Ile Asp Gly Xaa Pro Lys
1 5 10 15

Gly Tyr

<210> 187
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1 5 10 15

Gly Tyr

<210> 188
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<400> 188

Lys Asp Asx Asp Glu Val Asp Gly Ile Asp Pro Lys Gly Tyr  
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Gly Asp Glu Val Asp Gly Ile Asp  
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<210> 190  
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<400> 190

Lys Asp Xaa Gly  
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Lys Asp Xaa Xaa Gly  
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Gly Xaa Pro Lys  
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Lys Asp Asx Asp Glu Val Asp Gly Ile Asp Pro Lys Gly Tyr  
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<400> 194

Lys Asp Asx Asp Glu Val Asp Gly Ile Asp Pro Lys Gly Tyr  
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<210> 195
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<400> 195
Lys Asp Asx Xaa Gly Asp Glu Val Asp Gly Ile Asp Gly Xaa Pro Lys
1 5 10 15
Gly Tyr

<210> 196
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<220>  
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<400> 196

Asp Glu Val Asp Gly Ile Asn  
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<210> 197  
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<212> PRT  
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<400> 197

Xaa Asp Glu Val Asp Gly Ile Asn  
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Asp Glu Val Asp Gly Ile Asp  
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Leu Val Glu Ile Asp Asn Gly  
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Gly Ile Glu Thr Glu Ser Gly Val  
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Thr Gly Arg Thr  
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Val Met Thr Gly Arg Thr  
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<210> 203  
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Ser Glu Val Lys Leu Asp Ala Glu Phe  
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Ser Glu Val Lys Leu Asp Ala Glu Phe  
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Glu Glu Val Glu Gly Ile Asn  
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<210> 207  
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Tyr

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Gly Tyr

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Pro Lys Gly Tyr
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Pro Lys Asp Asp Tyr
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Gly Tyr

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Tyr

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Lys Asp Pro Xaa Gly Leu Glu Thr Asp Gly Ile Asn Gly Xaa Pro Lys  
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Gly Tyr

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<400> 250

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Gly Tyr

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<210> 252  
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<400> 252

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Gly Tyr

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<210> 255
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<223> F is D form
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Pro Lys Gly Tyr  
20

<210> 258  
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<400> 259

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Gly Tyr

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Lys Gly Tyr

<210> 261

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Gly Tyr

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<210> 263  
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<400> 263

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1 5 10 15

Lys Gly Tyr

<210> 264

<211> 17

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<400> 264

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Tyr

<210> 265

<211> 17

<212> PRT

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<400> 265

Lys Asp Pro Gly Asp Glu Val Asp Gly Ile Asn Gly Xaa Pro Lys Gly  
1 5 10 15

Tyr

<210> 266

<211> 16  
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<400> 266

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<210> 267  
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Gly Tyr

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Gly Tyr

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Gly Tyr

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Gly Tyr

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Gly Tyr

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Gly Tyr

<210> 274  
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Gly Tyr

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Lys Gly Tyr

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Gly Tyr

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Gly Tyr

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Gly Tyr

<210> 279  
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Gly Tyr

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Lys Gly Lys

<210> 282

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Lys Gly Tyr

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Lys Gly Tyr

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Pro Lys Gly Tyr  
20

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Pro Lys Gly Tyr  
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Gly Tyr

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Tyr

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Tyr

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Tyr

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Tyr

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Tyr

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Tyr

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Tyr

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Tyr

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Tyr

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<400> 374

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Gly Xaa Pro Lys Asp Asp Tyr  
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<210> 376

<211> 24

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Asp Tyr

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<400> 378

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Asp Tyr

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<210> 394

<211> 11

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Gly Tyr

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Gly Tyr

<210> 398  
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Gly Tyr

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Lys Gly Tyr

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